CryoProbe System

Pneumatic Vacuum Operator User Manual

Version 002

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Pneumatic Vacuum Operator

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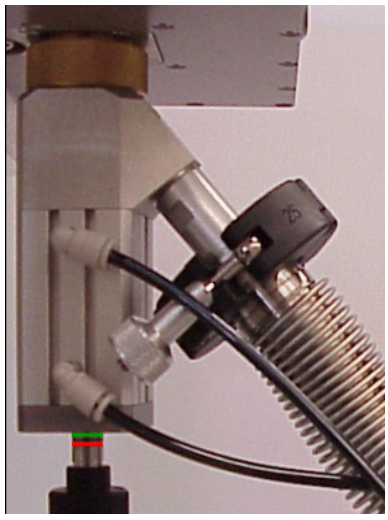
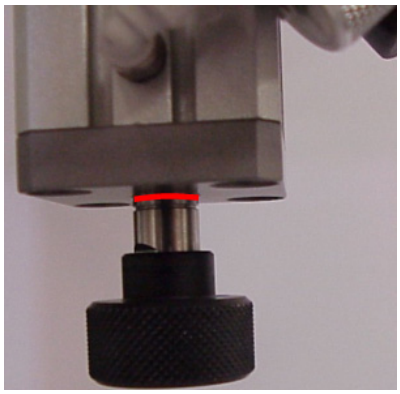
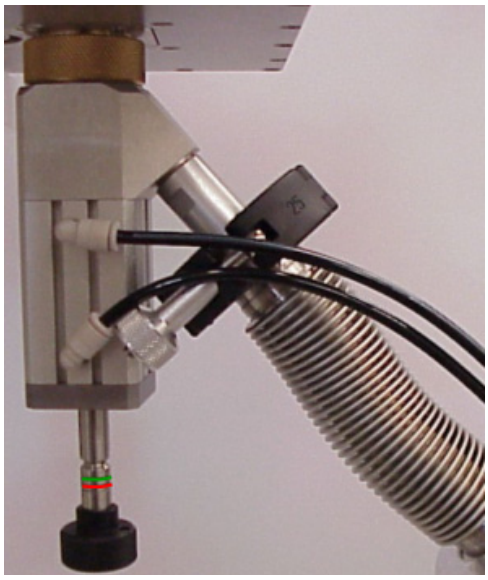
Mounting 1.1

Table 1.1. Mounting of the pneumatic vacuum operator

step	action
a.1	Unscrew the black protection cap from the top of the vacuum operator. **IMPORTANT:** Do not move the handle. This would break the vacuum inside the vacuum line. The green mark should remain aligned with the bottom of the body. *Figure 1.1. Pneumatic vacuum operator* 
a.2	Mount the vacuum operator to the CryoProbe by screwing in the brass ring (see ***"Figure 1.2."***). **IMPORTANT:** Do not over tighten (hand-screwed is sufficient for sealing). *Figure 1.2. Vacuum operator mounted to the CryoProbe* 

a.3	Screw in the handle into the vacuum plug of the CryoProbe until the green mark is no more visible and the red mark is aligned with the bottom of the body. Apply some vertical force by pushing the handle slightly up to assure that the thread is engaged into the vacuum plug (see ***"Figure 1.3."***). **REMARK:** In this position the dead volume between the vacuum operator and the vacuum plug is evacuated. *Figure 1.3. Handle engaged in to the vacuum plug* 
a.4	The system can now be cooled down. **REMARK:** When the message *vacuum plug can be opened now* appears the handle of the pneumatic operator should move down (see ***"Figure 1.4."***). If not, manually pull down the handle. *Figure 1.4. Handle down* 

Demounting *1.2*

When the CryoProbe is taken out of the magnet, the pneumatic vacuum operator should remain connected to the vacuum hose in order to maintain the vacuum in the line.

Table 1.2. Demounting of the pneumatic vacuum operator

step	action
b.1	Make sure that the warm-up procedure has terminated and that system has powered down.
b.2	Check on the pneumatic vacuum operator that the handle is completely up. The green mark should not be visible and the red mark should be aligned with the bottom of the body (see ***"Figure 1.3."***). If this is not the case, manually push up the handle to completely close the vacuum plug.
b.3	Screw out the handle from the vacuum plug of the CryoProbe until also the green mark gets visible. Apply 2 additional turns until a clicking announces that the thread is not any more engaged into the vacuum plug (see ***"Figure 1.2."***).
b.4	Unscrew the brass ring to remove the vacuum operator from the Cryo-Probe. The handle should not be moved any more but remain in the position where the green mark is aligned with the bottom of the body.
b.5	Screw the black protection cap to top of the vacuum operator. **REMARK:** Leave the pneumatic vacuum operator in that condition. Do not open the clamp that fixes the operator to the vacuum hose.

Figures

Tables

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